

REMARKS

Summary of the Office Action

Claims 1, 3-5, and 8 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Ogasawara et al.* (U.S. Patent No. 6,151,154).

Claims 2 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Matsuura* (U.S. Patent No. 6,510,111).

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Ootaki et al.* (U.S. Patent No. 5,936,923).

Summary of the Response to the Office Action

No changes to the claims have been proposed by this response. Claims 1-8 remain currently pending.

Claim Rejection Under 35 U.S.C. §102(e)

Claims 1, 3-5, and 8 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Ogasawara et al.* This rejection is respectfully traversed for at least the following reasons.

Applicants respectfully submit that *Ogasawara et al.* does not anticipate claims 1, 3-5, and 8 because *Ogasawara et al.* fails to disclose every feature of these recited claims. For instance, it is respectfully submitted that *Ogasawara et al.* fails to disclose the claimed combination as set forth in independent claim 1 including at least “a phase device for providing the light beam having been reflected from the information recording medium with a polarization phase difference between an inner light beam and an outer light beam so as to decrease optical interference between the 0-th order light and the diffracted light of the reflected light beam, the inner and outer light beam being inner and outer radius portions of the reflected light beam, respectively,” and “detecting portion which detects the inner light beam and the outer light beam

to generate at least one of focusing error signal and an aberration error signal of the light beam based on the detected inner and outer light beams.”

Applicants respectfully reemphasize the arguments as previously presented in the Amendment filed on October 14, 2003, *inter alia*, that the phase device of independent claim 1 provides a polarization phase difference between the light beams, and *Ogasawara et al.*’s wavefront aberration unit provides a phase difference (i.e., difference in optical path length) to the light portions, not a polarization phase difference.

In response to the arguments presented in the October 14, 2003 Amendment, the Final Office Action asserts that

the liquid crystal of *Ogasawara* is a birefringence control device (Fig. 3). In general, a birefringence material is optically anisotropic such that their optical properties are not the same along its two perpendicular axes. In other words, *Ogasawara*’s liquid crystal is a light polarizer because its two distinct indices affect light differently when the light components passing through its two axes. Paragraph 1, lines 10-17 of the Final Office Action.

In addition, based on the above-cited allegations, the Final Office Action goes on to assert that “*Ogasawara*’s liquid crystal produces light components with polarization phase difference.”

Paragraph 1, lines 17-19 of the Final Office Action. However, Applicants respectfully submit that even if the liquid crystal of *Ogasawara et al.* may change the polarization of the light beams, as purported by the Final Office Action, *Ogasawara et al.* still fails to teach or suggest providing the polarization phase difference in the manner set forth in Applicants’ claimed combination.

In contrast to Applicants’ claimed combination as a whole, the liquid crystal panel of *Ogasawara et al.* merely provides a light phase difference (i.e., difference in optical path length) between light passing through the division areas. That is, *Ogasawara et al.* focuses on the optical path length for correcting wavefront aberration of a light beam.

In addition, no portion of *Ogasawara et al.*'s disclosure teaches or suggests polarizations of inner and outer light beams. Accordingly, it is respectfully submitted that there is no teaching or suggestion in *Ogasawara et al.* for providing a polarization phase difference (i.e., a phase difference in polarization) between the inner and outer light beams.

Further, the polarization phase difference is irrelevant to and independent of the light phase (i.e., optical path length). In fact, a linearly polarized light can be changed to circularly polarized light by providing a polarization phase difference of 90 degrees without affecting the wavefront aberration in the light beam, for example. Thus, Applicants respectfully traverse and challenge the Examiner's assertions that *Ogasawara et al.* produces light components with polarization phase difference.

Moreover, according to an embodiment of the instant invention as claimed, a phase device provides a polarization phase difference between the inner and outer light beams to decrease optical interference between the 0-th order light and the diffracted light. In a disclosed embodiment of the present application, the interference can be decreased between the inner light of the 0-th order light and the outer light of the +1/-1st order diffracted light (i.e., the overlapped portions XI', YI' shown in FIG. 15). However, Applicants respectfully submit that no portion of *Ogasawara et al.*'s disclosure teaches or suggests an 0-th order light, a relationship between the 0-th order light and diffracted light, and optical interference between the 0-th order light and the diffracted light.

As a result, Applicants respectfully request the Examiner to provide specific reasons to support the assertion of anticipation, in the event that this rejection might be maintained in the next office communication.

In light of the above, Applicants respectfully submit that *Ogasawara et al.* does not disclose every feature of claims 1, 3-5, and 8. For instance, it is respectfully submitted that *Ogasawara et al.* fails to disclose the claimed combination as set forth in independent claim 1 including at least “a phase device for providing the light beam having been reflected from the information recording medium with a polarization phase difference between an inner light beam and an outer light beam so as to decrease optical interference between the 0-th order light and the diffracted light of the reflected light beam, the inner and outer light beam being inner and outer radius portions of the reflected light beam, respectively,” and “detecting portion which detects the inner light beam and the outer light beam to generate at least one of focusing error signal and an aberration error signal of the light beam based on the detected inner and outer light beams.”

M.P.E.P. § 2131 states “[t]o anticipate a claim, the reference must teach every element of the claim.” Applicants respectfully submit that since *Ogasawara et al.* does not teach or suggest all of the features of independent claim 1, *Ogasawara et al.* does not anticipate claim 1. Further, since claims 3-5 and 8 depend from claim 1, it is respectfully submitted that *Ogasawara et al.* also does not anticipate claims 3-5 and 8. Accordingly, withdrawal of the rejection of claims 1, 3-5 and 8 under 35 U.S.C. §102(e) is respectfully requested.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 2 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Matsuura*. Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Ootaki et al.* They are respectfully traversed for at least the following reasons.

It is respectfully submitted that *Matsuura* and *Ootaki et al.* are not relied upon to teach or suggest a phase device, and do not remedy the above-discussed deficiencies of *Ogasawara et al.*

with regard to the rejection under 35 U.S.C. §102(e). Thus, at least because claims 2, 6 and 7 depend from claim 1, and because the applied references, whether taken separately or in combination, fail to teach or suggest every feature of claims 2, 6 and 7, Applicants respectfully submit that the applied references fail to render claims 2, 6 and 7 unpatentable. Accordingly, withdrawal of the rejections under 35 U.S.C. §103(a) of claims 2, 6 and 7 are respectfully requested.

Conclusion


In view of the foregoing, withdrawal of the rejections and allowance of the pending claims are earnestly solicited. Should there remain any questions or comments regarding this response or the application in general, the Examiner is urged to contact the undersigned at the number listed below.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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Dated: June 16, 2004

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